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ЛОГІСТИКА В ПОЛЬЩІ – СИНТЕТИЧНИЙ ОГЛЯД СУЧАСНОГО СТАНУ ТА ПЕРСПЕКТИВ

Розглянуто важливе значення, яке має логістика в економіці країни. Вона постійно розвивається, так що може задовольнити вимоги сучасних підприємств та адаптації до динамічних змін в економічному середовищі, особливо до глобалізації на товарних ринках і в дистрибуції. Наявний зростаючий попит на інтегровані логістичні провайдери послуг, які працюють або локально, або є глобальними гравцями ринку. Нижче наведені нові виклики для логістики, серед яких можна зазначити такі: зелена логістика, збалансований та соціально-відповідальний транспорт і ланцюги постачання, безпека і технології в ланцюзі постачання.

Ключові слова: логістика, інтермодальний транспорт, он-лайн торгівля, інфра-структура.

LOGISTICS IN POLAND – SYNTHETIC OVERVIEW OF CURRENT STATE AND PROSPECTS

Logistics is playing more and more important role in economy. It is constantly evolving so that it can meet the requirements of contemporary businesses and adapt to dynamic changes in the economic environment, especially to the globalization of trade markets and distribution. There is a growing demand for integrated logistic service providers who either operate locally or are global market players. The following are new challenges for logistics, to name just a few: green logistics, balanced and socially responsible transport and chain of delivery, safety, and technologies in the chain of delivery.

Key words: logistics, intermodal transport, online trade, infrastructure.

Problem formulation. Based on the discussion of trends that are affecting both the global and Polish economies, this paper evaluates the place of Poland, among other countries, on the map of logistic efficiency as presented in the World Bank's ranking. Then, selected sectors of logistics in Poland are given a synthetic assessment.

Analysis of current research outputs and publications. The present paper is based on the research and analyses conducted by Polish researchers of the Institute of Logistics and Storage as well as on the output of the "Future of Logistics" seminar held by Leon Kozminski Academy in April 2014 where both the evaluation and trends of logistics were presented by Polish and foreign scholars.

Article objectives. The aim of the present paper is to synthetically present the Polish logistics and its actual state, prospects and challenges, on the background of the world and Polish economy.

Presentation of main materials.

1. Basic trends

Due to undergoing changes in the world economy, there are new megatrends emerging which are significant for the logistics in Poland. The idea of "megatrend" is here defined as a force which fundamentally diverts the functioning of business entities. A megatrend affects their operations and competitiveness. A megatrend appears globally or locally and has a potential to act in the future, which considerably influences nearly each aspect of the social life; it affects both individuals as well as business entities [7, p. 22]. Research is more and more often pointing to the six essential megatrends.

They are:

- Changes in the location of business centres towards Asia and Africa,
- Globalization and regionalisation as a response to market changes,
- Urbanization; it is estimated that over 70% of the overall population will have settled cities by 2050,
- Ecology and the increasing tendency to the balanced development of businesses and transport,
- Ageing of populations; demographic issue is especially acute in Poland,
- Dynamic development of e-trade and net economy.

In 2013 the following trends [8, p. 24] affected logistics in Poland:

- Expansion and consolidation of the national logistic network,
- Exploitation of the innovative internet and mobile tools to supervise and manage deliveries and to communicate with the client,
- Logistic services recipients' search for saving in all links of the chain delivery.

2. Poland and its position

3. Even though Poland enjoys positive assessment, yet, the country's position has dropped in the World Bank's ranking [15]. LPI (Logistics Performance Index) as the weighted average of marking in the six key criteria, i.e. effectiveness of the border control and customs control, quality of logistic infrastructure, (e.g. roads, railways, ports), ease of arranging deliveries at competitive prices, logistic competence, ability to identify and track deliveries and, finally, timely delivery within the scheduled time, all indicate that the biggest trouble spot for Poland is the condition of the logistic infrastructure. Its quality translates into Poland's drop in the mentioned ranking. Table 1 presents the ranking of 2014. Even so, according to the Top 100 Report in transport and logistic services [8, p. 25], the potential of the Polish logistic market to grow is high and ranked seventh in Europe. Its value has been established at € 45 billion.

Table 1

Logistic efficiency in selected countries including Poland and Ukraine in 2014

Country	LPI Rank	LPI Score	Customs	Infrastru-ckture	International shipments	Logistics compe-tences	Tracking and tracing	Timeliness
Germany	1	4.12	4.10	4.32	3.74	4.12	4.17	4.36
Netherlands	2	4.05	3.96	4.23	3.64	4.13	4.07	4.34
Belgium	3	4.04	3.80	4.10	3.80	4.11	4.11	4.39
United Kingdom	4	4.01	3.94	4.16	3.63	4.03	4.08	4.33
Singapore	5	4.00	4.01	4.28	3.70	3.97	3.90	4.25
Sweden	6	3.96	3.75	4.09	3.76	3.98	3.97	4.26
Norway	7	3.96	4.21	4.19	3.42	4.19	3.50	4.36
Luxembourg	8	3.95	3.82	3.91	3.82	3.78	3.68	4.71
United States	9	3.92	3.73	4.18	3.45	3.97	4.14	4.14
Japan	10	3.91	3.78	4.16	3.52	3.93	3.95	4.24
Ireland	11	3.87	3.80	3.84	3.44	3.94	4.13	4.13
Canada	12	3.86	3.61	4.05	3.46	3.94	3.97	4.18
France	13	3.85	3.65	3.98	3.68	3.75	3.89	4.17
Switzerland	14	3.84	3.92	4.04	3.58	3.75	3.79	4.06
Hong Kong, China	15	3.83	3.72	3.97	3.58	3.81	3.87	4.06
Turkey	30	3.50	3.23	3.53	3.18	3.64	3.77	3.68
Poland	31	3.49	3.26	3.08	3.46	3.47	3.54	4.13
Ukraine	61	2.98	2.69	2.65	2.95	2.84	3.20	

Source: Author's own based on [15]

4. Synthetic view of the Polish logistics

Excluding the two major players, i.e. Polish Post and PKP Cargo Logistics, in 2013 the Polish market was dominated by logistic operators of the local capital origin. The biggest operators, according to their revenues from TSL in 2013, are presented in table 2.

Table 2

Operators by their gross receipts from the sale of TSL

Logistic operator	Revenues in thousands PLN
Grupa Raben	2 012 000
Schenker Sp z o.o.	1 310 510
FM LOGISTICS Polska	797 419
DPD Polska Sp z o.o.	677 132
Lotos Kolej Sp. z o.o.	579 465
Rohling Suus Logistics S.A	508 740
GEFCO Polska Sp z o.o.	484 495
Grupa DSV	478 243
PEKAES	467 373
JAS – FBG Sp. z o.o.	447 214

Source: [2]

3.1 Courier business

Courier services sector partly contributes to the transport – forwarding – logistics sector in Poland. It belongs to the fastest expanding logistics sectors with the increase of 10% from year to year. The dominating trends in the sector of courier services KEP (courier, express parcel) are those which offer new and alternative solutions. Figure 1 presents instances of trends. Due to the importance of the time aspect, and the demand for rather small and fast deliveries, global courier businesses possess their own fleets of aircraft. In spite of it being an expensive form of transport, its share in the market of logistic services is gaining in strength, mainly due to the introduction of unmanned air vehicles and the so called delivery drones.

Investments in IT, E-trade service, Courier brokers, New shipment and delivery points, One-stop shopping, Dedicated services, Logistics of returns
Figure 1. Trends in the courier sector KEP in Poland

Source: [5, p. 122]

Main businesses operating on the Polish market of courier services and their market share are presented in Chart 1. One can see that the dominating positions on this market have been occupied by globally operating courier businesses, such as DHL and UPS which together hold nearly 50% of the market.

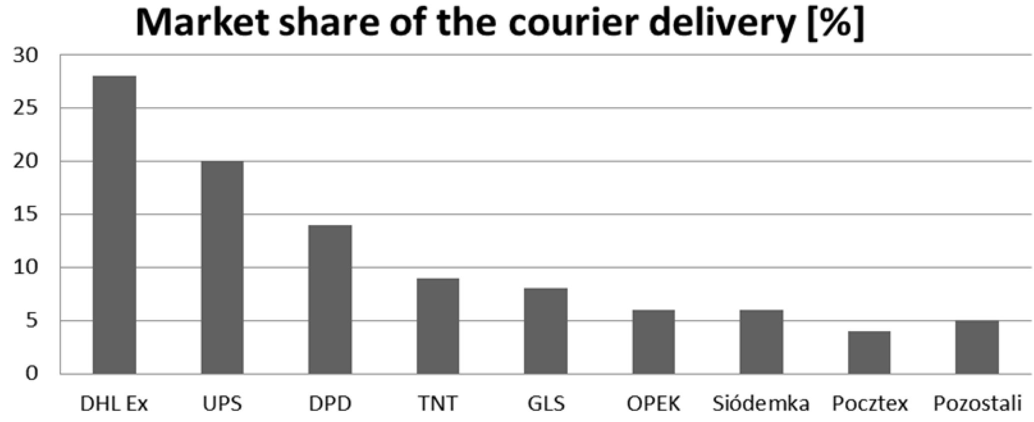


Chart 1. Main businesses and their market share

Source: [13]

Polish researchers' forecast for this sector indicates a gradually increasing trend. The trend is presented in chart 2.

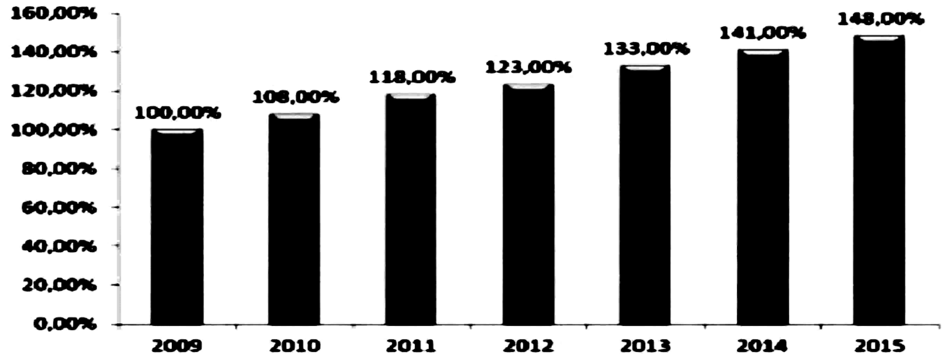
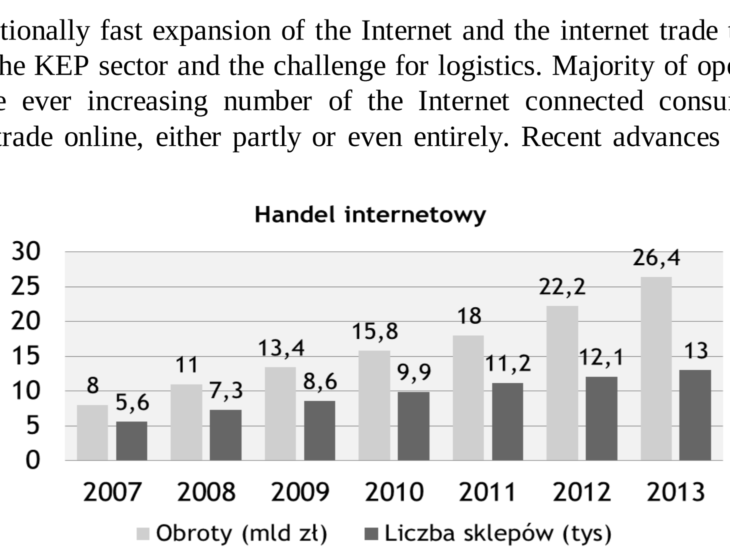


Chart 2. Forecast for KEP and GDP in Poland in 2010–2015

Source: Author's own, based on [11]

3.2. Internet

It is now exceptionally fast expansion of the Internet and the internet trade that have both become the driving force for the KEP sector and the challenge for logistics. Majority of operations are run mostly online. Following the ever increasing number of the Internet connected consumers, more and more businesses decide to trade online, either partly or even entirely. Recent advances in the online trade are presented in chart 3.



Online trade, Turnover (bn PLN),Number of shops (in thousands PLN)
Chart 3. Turnover and the number of shops in 2007–2013

Source: [13]

This phenomenon is related to the expansion of the broadband Internet, in addition to which, 40% of the Internet business is done via tablets and smartphones. Broadband Internet search index per 1000 inhabitants is constantly increasing. The trend is presented in chart 4.

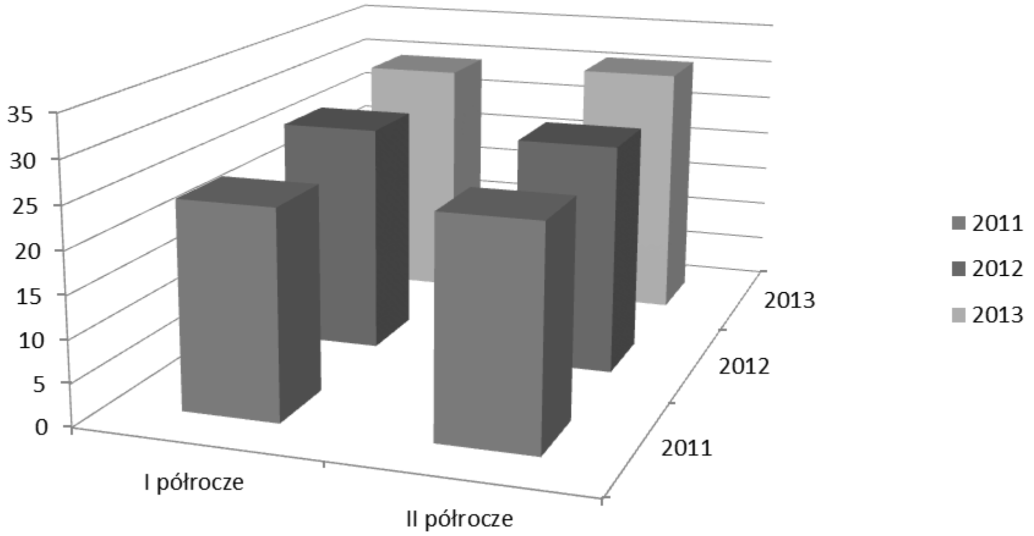


Chart 4. Index of the broadband Internet search in Poland

Source: author's own, following [10, p. 73]

3.3 Intermodal transport in Poland

Intermodal transport in Poland is seen as a yet developing sector and, in the EU transport policy it is one of the most supported forms of transport. The strategic goal for this market sector was set in the Strategy for Transport by 2020 [14]. Its subsequent adoption by the Polish government in 2013 indicates the state's aspiration to establish infrastructure conditions facilitating the subsequent rise of consistent network of terminals and multimodal platforms, so indispensable to create efficient intermodal transport. Market share of this sector has exceeded 6%. Both the bulk and the amount of work carried out in the intermodal haulage are presented in table 3. It highlights the increasing measures which show sustained development.

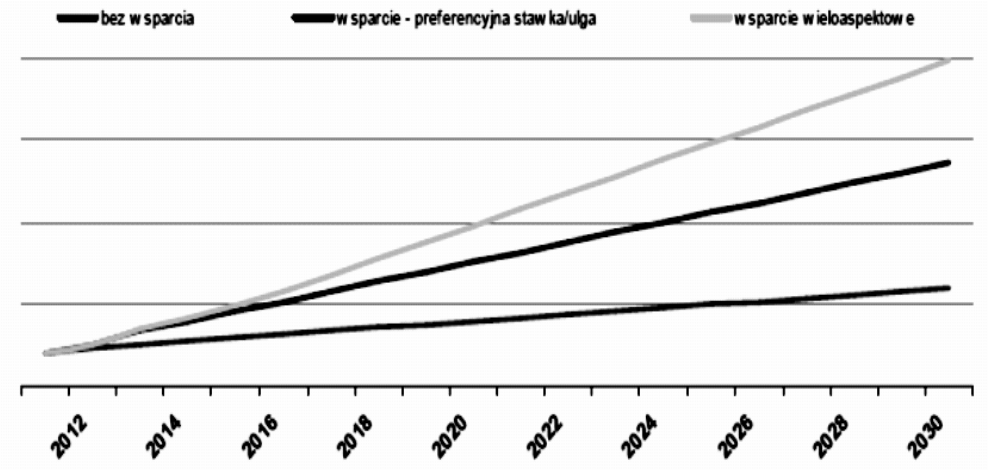
Table 3

Bulk and haulage work in intermodal transport in the 1st and 2nd quarters of 2012–2014

Thousand tons year	I quarter	II quarter	thousand ton-km year	I quarter	II quarter
2014	2 252,5	2 428,9	2014	807 418,1	872 340,3
2013	2059,1	2 095,4	2013	737 598,9	760 020,3
2012	1 895,6	2 048,5	2012	713 801,8	806 250,4
change 2014/2013	9,39%	15,92%	change 2014/2013	9,47%	14,78%

Source: Author's own based on [16]

All the same, for the further development of the intermodal transport it is absolutely necessary to both subsidize the access rates to the rail transport infrastructure as well as to exploit the EU funds to build specialist infrastructure and increase the rolling stock. A drop in rates may boost the intermodal transport growth by 8 to 10% annually. The forecast for the expansion of the intermodal transport by 2030 is presented in Chart 4 depending on the size of support.



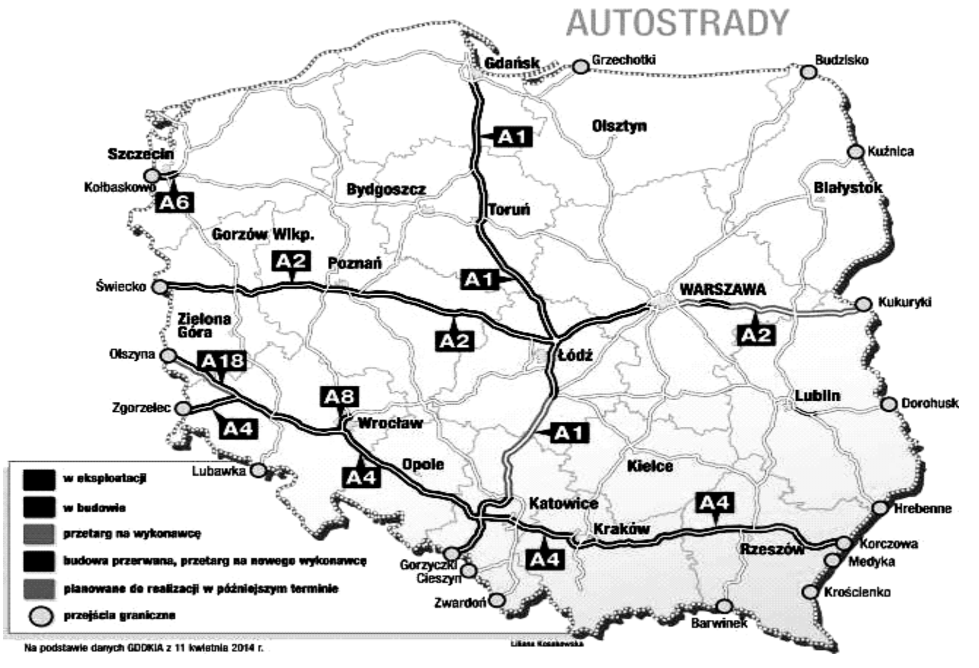
Without support   support – preferential rate / concessionmultidimentional support

Chart 4. Forecast for the development of the intermodal transport

Source: [17]

3.4. Logistic infrastructure

Effectiveness of logistic services is subject to diversified infrastructure. It also appears as a consequence of changes in the business model of contemporary logistic operators who are striving to extend their range of services to the door-to-door comprehensive service provision. This requires high quality line infrastructure (roads, railways) and spot infrastructure (warehouses, container terminals, logistic centres). Poland already has over 1500 km motorways. The present overview of motorways and expressways is presented on the road map 1 below.



Map 1. Roads in Poland – planned and accomplished constructions as provided by the Programme for National Roads Construction 2011 – 2015

Source: [9]

There are about 20 000 km railways in use in Poland. Their quality has been improving since 2010. Presentation is table 4. Good quality railways are gaining more and more share which results from increased efforts on the side of the Polish infrastructure administrator as well as from the exploitation of the European funds.

Table 4

Condition and quality of PKP PLK infrastructure

grade /year	2010	2011	2012
good	36,3%	40,0%	43,0%
satisfying	34,5%	32,0%	30,0%
unsatisfying	29,2%	28,0%	27,0%

Source: Author's own based on UTK and PLK S.A. sources

Improvement in the condition and quality parameters of the line infrastructure together with consistent expansion of the line infrastructure (about 30 container terminals) give a bright outlook. This can be confirmed by 2014 optimism index for TSL sector which has risen by 44 percentage points. It increased by 12 percentage points in 2013.

The market for modern storage area, despite turbulence, is not in a decline but is steadily gaining in size. It corresponds to the market demand. 2013 was a good year for the sector. Prospects for the future are based primarily on:

- improved road infrastructure,
- geographical location of the country,
- higher national demand and bigger supply of storage area,
- expansion of online trade,
- well qualified and relatively cheap workforce.

A new trend in the supply of modern storage areas is the accomplishment of safe projects. It is estimated that the market for storage areas in Poland will reach 8,5 – 9 million square meters in 2014. The market is driven by logistic operators and e-commerce [12]. This may be confirmed by the entrance of Amazon, a world giant, with its two distribution centres covering 324 000 square meters in Wrocław and Poznań.

Conclusions and perspectives for further research. Even though logistic businesses in Poland sail through the troubled waters unharmed, there is still a lot of challenge ahead which may be grouped in two categories as presented in the chart 2 below.

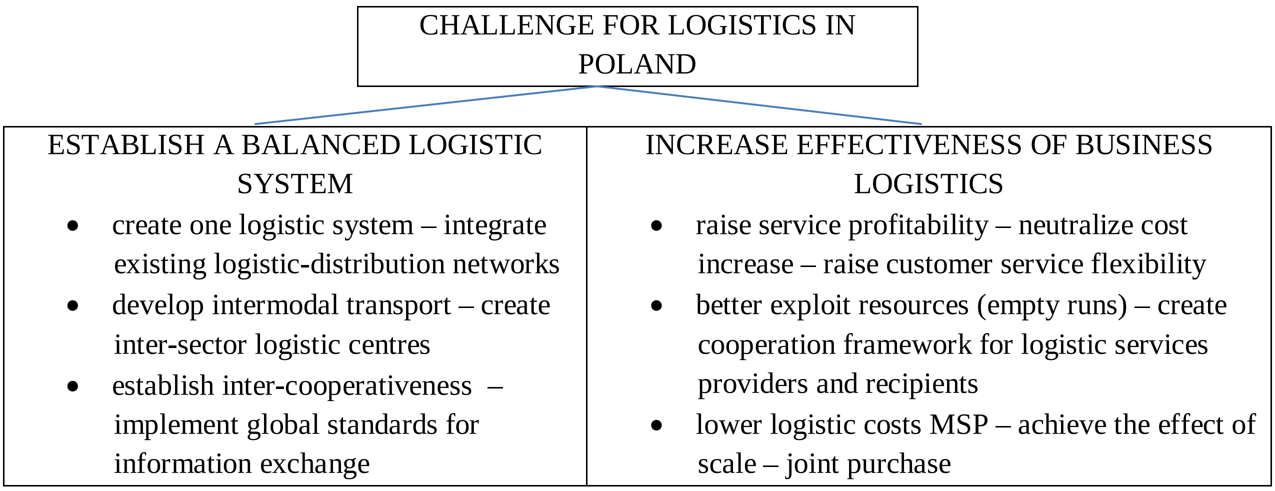


Figure 2. Challenge for Logistics in Poland

Source: Author's own based on [13]

Logistics in Poland, despite difficulties, is developing. Its growth is strengthened by infrastructural investments (roads and motorways construction, revitalization of the rail as well as raising terminals and logistic centres). These actions, together with IT infrastructure and automatization of logistic processes will determine further upturn in the efficiency of Polish logistic and its position in the World Bank ranking. These elements are reflected in the research programme "INNLOG'" – innovative logistics as a precondition for balanced development – in which Leon Kozminski Academy participates, together with, among others, Institute of Logistics and Storage in Poznań. The programme comprises five themes, i.e. balanced supply chains, multimodal logistic networks, innovative logistic infrastructure, urban systems for property logistic servicing and, finally intelligent IT systems which aid logistics. The prime goal is to uplift the quality of logistic processes and systems to better serve economic processes in Poland and, at the same time, to advance Polish logistics in the world ranking from 31 position to the top 20 highest valued national logistic and transport systems in the world [6, p. 1 – 5].

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